



**UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/889,017	07/07/97	SHEHADA	R P07-38135

ANNE WANG, ESQ.  
PRETTY, SCHROEDER & POPLAWSKI  
444 SOUTH FLOWER STREET  
19TH FLOOR  
LOS ANGELES CA 90071

MM92/0324

EXAMINER

ISRAEL, A

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 03/24/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

MM92/0324

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
08/889,017	07/07/97	054	ISRAEL, A	2878 03/24/00
First Named Applicant	SHEHADA, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION METHOD AND DEVICES FOR LASER INDUCED FLUORESCENCE ATTENUATION SPECTROSCOPY

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 P07-38135	250-461.200	K08	UTILITY	YES	\$605.00	06/26/00

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

**I. Review the SMALL ENTITY status shown above.**

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

**II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.**

**III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.**

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

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for use through 06/30/99 (0651-0033)

U S GPO 1999-454-457/24601

# Notice of Allowability

Application No.

08/889,017

Applicant(s)

Shehada et al.

Examiner

Andrew Israel

Group Art Unit

2878



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to amendments filed 02/23/00 and 03/17/00

☒ The allowed claim(s) is/are 1-3, 5-10, 12-42, and 48-61

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☒ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. \_\_\_\_\_

☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☒ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

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## DETAILED ACTION

### *Response to Amendment*

The amendment filed February 23, 2000 and the supplemental amendment filed March 17, 2000 have been entered in full.

Regarding independent claims 1, 39, 41, 48, 50, 52-56, and 59-61, Zuckerman discloses in Figure 3 and column 10, lines 1-48, a spectroscopic method and device for determining a physiological characteristic of a biological sample (or hemoglobin concentration, see col. 2, line 41), comprising: irradiating a living tissue (or biological) sample (col.8, line 17) with substantially monochromatic radiation through waveguide (or optical fiber bundle) 66 from source 52 to induce fluorescence (col. 8, lines 17-20) in the sample; monitoring a first portion of the modulated return fluorescence at a first distance from the sample with a first sensor 88A; monitoring a second portion of the return fluorescence at a second distance from the sample with a second sensor 88B. However, Zuckerman does not disclose said second distance being different from said first distance, therefore; said claims are allowable in view of Zuckerman.

Further regarding independent claims 1, 39, 41, 48, 50, 52-56, and 59-61, Alfano discloses in Figure 2 and column 4, lines 20-32 and column 5, lines 36-68, an apparatus and method for determining a physiological or pathological (malignancy) property of a living tissue sample (or sample volume), comprising a monochromatic laser source 43 (see col. 5, line 38 and col. 4, line 20); a first waveguide (optical fiber bundle) B disposed a first distance from a

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biological sample S to transmit radiation to the sample and induce fluorescence of the sample; a first sensor 59 for determining the intensity of the first portion of modulated return light; a second waveguide (optical fiber bundle) 53 disposed at a second distance for receiving a second portion of return light. However, Alfano only discloses comparing said first and second portions of modulated light to a known standard (see col. 6, lines 1-6) and does not disclose comparing the first and second portions of modulated fluorescence to each other. Therefore, said claims are allowable in view of Alfano.

Further regarding independent claims 1, 39, 41, 48, 50, 52-56, and 59-61, Sevick-Muraca discloses in Figure 1 and page 7, line 10 through page 8, line 13, an apparatus for analyzing a sample, comprising: a monochromatic light source 120 adapted to emit radiation that is directed at a biological sample 100 to produce return radiation (or fluorescence) from the biological sample 100, wherein the return radiation is modulated by the sample; a first waveguide (or optical fiber) 123 disposed a first distance from the sample to transmit the excitation light from the light source to the biological sample; a first sensor 148 adapted to monitor the return radiation at a first distance from the sample; a second waveguide (or optical fiber) 143 disposed at a second distance from the sample adapted to collect a second portion of the return light. However, Sevick-Muraca fails to disclose comparing the first and second portions of the modulated fluorescence to each other and therefore, fails to meet the limitations of the claims.

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*Allowable Subject Matter*

1. Claims 1-3, 5-10, 12-42, and 48-61 are allowed.
2. The following is an examiner's statement of reasons for allowance: Examiner's response to amendments and Examiner's previous indication of allowable subject matter will suffice for reasons for allowance. The remainder of the claims are allowable due to their dependence.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Israel whose telephone number is (703) 305-0382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2800 receptionist whose telephone number is (703) 308-0956.

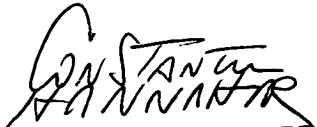
Papers related to Technology Center 2800 applications **only** may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT." The faxing of such papers must conform with


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the notice published in the Official Gazette, 1096 OG 34-35 (November 15, 1988). The Fax number for Group Art Unit 2878 is (703) 308-7722 or (703) 308-7724.

  
CONSTANTINE HANNAHER  
PRIMARY EXAMINER  
GROUP ART UNIT 2878

AI  
  
March 21, 2000